CLAIM AMENDMENTS

Listing of claims:

1. (Currently amended) A computerized method of annotating a computer program comprising:

parsing an annotation representation in the source code;

transforming the annotation representation into intermediate language code; ~~and~~

generating annotation information from the intermediate language code, the annotation information corresponding to the annotation representation; and

analyzing the computer program with the annotation information before the source code is compiled.

2. (Previously presented) The computerized method as in claim 1,

wherein the annotation information contains an address; and

wherein the annotation information contains a plurality of arguments of the annotation representation.

3. (Original) The computerized method as in claim 2, wherein annotation information further comprises an annotation symbol.

4. (Original) The computerized method as in claim 2, wherein a convention in the arguments identifies different areas of interest.

5. (Original) The computerized method as in claim 2, further comprising:

generating at least one argument of the annotation representation according to a software component.

6. (Original) The computerized method as in claim 5, wherein the software component is sclected from the group consisting of a macro and a command line definition.

7. (Original) The computerized method as in claim 1, further comprising:

receiving an input argument; and

controlling the generating of the annotation information in accordance with the input argument.

8. (Original) The computerized method as in claim 1, wherein:

the parsing is performed by the front-end component of a compiler; and

the generating is performed by the back-end component of the compiler.

9. (Original) The computerized method as in claim 1, further comprising:

generating computer executable instructions from source code that is associated with the annotation representation; and

associating the annotation information with the computer executable instructions that is associated with the annotation representation.

10. (Previously presented) The computerized method as in claim 1, wherein the annotation representation is located inline within a function.

11. (Original) The computerized method as in claim 1, further comprising:

generating debug information from predetermined information; and

wherein the debug information is associated with the annotation representation.

12. (Original) The computerized method as in claim 11, wherein the predetermined information further comprises command line options.

13. (Original) The computerized method as in claim 1, wherein the representation further comprises a function call and wherein the arguments further comprise parameters.

14. (Currently amended) A computerized method comprising:

annotating computer source code before the source code is compiled using an intrinsic function call in the source code.

15. (Original) The computerized method as in claim 14, wherein annotating further comprises:

generating annotation information from the intrinsic function call;

generating a symbol having string parameters of the intrinsic function call;

emitting the annotation information into a computer object file; and

emitting the symbol to a symbol table associated with the computer object file.

16. (Original) The computerized method as in claim 15, wherein generating annotation information and emitting the annotation information are performed in parallel with generating a symbol and emitting the symbol.

17. (Original) The computerized method as in claim 15, further comprising:

generating computer executable instructions from source code that is associated with the intrinsic function call; and

associating the annotation information with the computer executable instructions.

18. (Original) The computerized method as in claim 15, wherein a convention in the string parameters identifies different areas of interest in analysis.

19. (Currently amended) A computerized method of controlling a first computer program analysis tool comprising:

reading annotation information from an executable computer program; and

controlling execution of the first computer program analysis tool using the annotation information before source code associated with the executable computer program is compiled.

20. (Original) The computerized method as in claim 19, wherein, the first computer program analysis tool further comprises a program analysis tool selected from the group consisting of a debugger, profiler, a fault injector, and an optimizer.

21. (Original) The computerized method as in claim 19, wherein the annotation information having been generated from an intrinsic annotation function call that the executable computer program was compiled from, the annotation information having at least one string parameter.

22. (Original) The computerized method as in claim 19, wherein an output of the first computer program analysis tool is read as input to a second computer program analysis tool.

23. (Original) The computerized method as in claim 22, wherein the second computer program analysis tool further comprises a program analysis tool selected from the group consisting of a profiler, a fault injector, and an optimizer.

24. (Currently amended) A computerized method of modifying an executable computer program comprising:

reading annotation information in an executable computer program; and

modifying the executable computer program in accordance with ~~the information in~~ the annotation information before source code associated with the executable computer program is compiled.

25. (Currently amended) The computerized method as in claim 24, wherein the modifying further comprises:

inserting code into the executable program to perform an action in accordance with ~~the information in~~ the annotation information.

26. (Currently amended) The computerized method as in claim 24, wherein the modifying further comprises:

optimizing the executable program in accordance with ~~the information in~~ the annotation information.

27. (Original) The computerized method as in claim 24, wherein the annotation information having been generated from an intrinsic annotation function call that the executable computer program was compiled from, the annotation information having at least one string parameter.

28. (Currently amended) A computer-readable medium having computer-executable instructions to a cause a computer to perform a method comprising:

parsing an intrinsic annotation function call within source code associated with a computer program, thereby generating a parsed annotation function; ~~and~~

generating annotation information from the parsed annotation function; and

analyzing the computer program with the annotation information before the source code is compiled.

29. (Original) A computer-readable medium as in claim 28, having computer-executable instructions to a cause a computer to perform a method further comprising: generating a symbol from string parameters of the intrinsic function call; and emitting the symbol to a symbol table associated with the annotation information.

30. (Original) A computer-readable medium as in claim 28, wherein the annotation information resides in an object file that is stored on a computer-readable medium.

31. (Original) A computer-readable medium as in claim 28, wherein the intrinsic annotation function call is generated by a software component that resides on a computer readable medium.

32. (Original) A computer-readable medium as in claim 31, wherein the intrinsic annotation function call is selected from the group consisting of a macro and a command line definition.

33. (Currently amended) A computer-readable medium for controlling a computer program analysis tool comprising:

reading annotation information in an executable computer program; and

controlling execution of the computer program analysis tool using the annotation information before source code associated with the executable computer program is compiled.

34. (Previously presented) The computer-readable medium as in claim 33, wherein the annotation function includes an intrinsic annotation function call that the executable computer program was compiled from, the annotation information having at least one string parameter.

35. (Currently amended) A computer-readable medium for modifying an executable computer program comprising:

reading annotation information in an executable computer program; and

modifying the executable computer program in accordance with ~~the information in~~ the annotation information before source code associated with the executable computer program is compiled.

36. (Previously presented) The computer-readable medium as in claim 35, wherein the annotation function includes an intrinsic annotation function call within source code that the executable computer program was compiled from, the annotation information having at least one string parameter.

37. (Original) The computer-readable medium as in claim 35, wherein the modifying further comprises:

inserting code into the executable program to perform an action in accordance with the information in the annotation information.

38. (Currently amended) A computer-readable medium for annotating a computer program comprising:

parsing a source annotation representation in an executable computer program, yielding a parsed source annotation representation;

generating annotation information from the parsed source annotation representation; and

analyzing the executable computer program with the annotation information before source code associated with the source annotation representation is compiled.

39. (Currently amended) A computer-readable medium having stored thereon a data structure that is executable by a processor comprising:

annotation information corresponding to an annotation function in a source computer program, wherein the annotation information remains with the source computer program during execution of the source computer program.

40. (Original) The computer-readable medium as in claim 39, wherein the annotation information further comprises an operand corresponding to parameters of the annotation function in the source computer program.

41. (Currently amended) A computer-readable medium having stored thereon a compiler comprising:

a front-end component that parses an annotation function call in source code associated with a computer program, generating a parsed annotation function; and

a back-end component operably coupled to the front-end component that generates annotation information from the annotation function call, wherein the annotation information remains with the source code during execution of the computer program.

42. (Original) The computer-readable medium as in claim 41, wherein the back-end component further comprises:

a receiver operably coupled to the front-end component, that receives the parsed annotation function;

a transformer operably coupled to the receiver, that transforms the parsed annotation function into intermediate language code; and

a generator operably coupled to the transformer that generates annotation information from the intermediate language code.

43. (Currently amended) A computer-readable medium having stored thereon a computer program analysis tool apparatus comprising:

a receiver of annotation information from an executable computer program; and

an execution controller operably connected to the receiver that is arranged to control ~~controls~~ the execution of the computer program analysis tool using the annotation information before source code associated with the executable computer program is compiled.

44. (Currently amended) The computer-readable medium, as in claim 43, wherein the execution controller overrides the default behavior of the computer program analysis tool using the annotation information.

45. (Previously presented) The computer-readable medium, as in claim 44, wherein output of the computer program analysis tool is read as input to another computer program analysis tool.

46. (Currently amended) A computer-readable medium having stored thereon a computer program analysis tool apparatus comprising:

a receiver of annotation information from an executable computer program; and

a modifier of the executable computer program operably connected to the receiver that is arranged to modify ~~modifies~~ the executable computer program in accordance with the annotation information before source code associated with the executable computer program is compiled.

47. (Original) The computer-readable medium as in claim 46, wherein the modifier further comprises an inserter of executable computer code into the executable program to perform an action in accordance with the information in the annotation information.

48. (Previously presented) The computer-readable medium, as in claim 46, wherein output of the computer program analysis tool is read as input to another computer program analysis tool.

49. (Previously presented) The computerized method as in claim 13, wherein the function call includes at least one argument.

50. (Previously presented) The computerized method as in claim 49, wherein the at least one argument corresponds to a parameter.

51. (Previously presented) The computerized method of claim 19, wherein the annotation information is generated via an annotation function within source code associated with the executable program.

52. (Previously presented) The computerized method of claim 24, wherein the annotation information is generated via an annotation function within source code associated with the executable program.

53. (Previously presented) The computerized method of claim 33, wherein the annotation information is generated via an annotation function within source code associated with the executable program.

54. (Previously presented) The computerized method of claim 35, wherein the annotation information is generated via an annotation function within source code associated with the executable program.

55. (Previously presented) The computerized method of claim 43, wherein the annotation information is generated via an annotation function within source code associated with the executable program.

56. (Previously presented) The computerized method of claim 46, wherein the annotation information is generated via an annotation function within source code associated with the executable program.

57. (New) The computerized method as in claim 1, wherein the annotation information remains with the source code.

58. (New) The computerized method of claim 19, wherein the annotation information remains with the source code.

59. (New) The computerized method of claim 24, wherein the annotation information remains with the source code.

60. (New) The computer-readable medium as in claim 28, wherein the annotation information remains with the source code.

61. (New) The computer-readable medium as in claim 33, wherein the annotation information remains with the source code.

62. (New) The computer-readable medium as in claim 35, wherein the annotation information remains with the source code.

63. (New) The computer-readable medium as in claim 38, wherein the annotation information remains with the source code.

64. (New) The computer-readable medium as in claim 43, wherein the annotation information remains with the source code.

65. (New) The computer-readable medium as in claim 46, wherein the annotation information remains with the source code.